UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10 LABORATORY
7411 Beach Dr. East
Port Orchard, Washington 98366

QUALITY ASSURANCE MEMORANDUM FOR ORGANIC CHEMICAL ANALYSES

Date: August 30, 2010

To: Bruce Long, Project Manager
Office of Compliance and Enforcement, USEPA Region 10

From: Gerald Dodo, Chemist
Office of Environmental Assessment, USEPA Region 10 Laboratory

Subject: Quality Assurance Review for the PCB Aroclor Analysis of Samples from the APES and Merit Oil Project

Project Code: OOO-148A
Account Code: 1011B10P201B53C

The following is a quality assurance review of the data for PCB Aroclor analysis samples from the above referenced site. The analyses were performed by EPA Region 10 Laboratory Chemists following US EPA Laboratory guidelines.

This review was conducted for the following samples:

10224800	10224801	10224802	10224803	10224804	10224805	10224806
10224807	10224808	10224809	10224810	10224811		

Data Qualifications

Comments below refer to the quality control specifications outlined in the Laboratory's current Quality Assurance Manual, Standard Operating Procedures (SOPs) and the Quality Assurance Project Plan (QAPP). No excursions were required from the method Standard Operating Procedure.

The quality control measures which did not meet Laboratory/QAPP criteria are annotated in the title of each affected subsection with *"Laboratory/QAPP Criteria Could Not be Met"*.

For those tests for which the EPA Region 10 Laboratory has been accredited by the National Environmental Laboratory Accreditation Conference (NELAC), all requirements of the current NELAC Standard have been met.

1. Sample Receipt

Upon sample receipt, no conditions were noted that would impact data quality.

2. Sample Holding Times

The concentration of an analyte in a sample or extract of a sample may increase or decrease over time depending on the nature of the analyte. For this reason, holding time limits are recommended for samples and extracts. Extracts were analyzed within 40 days of preparation. No qualifiers were applied based on holding times.

3. Sample Preparation

Samples were prepared according to the method.

4. Initial Calibration/Continuing Calibration Verification (CCV)

Initial calibrations were performed on 05/18/10, 05/27/10, 07/08/10, 07/20/10, and 07/21/10. Calibration curves met the coefficient of determination criteria.

The CCV for reported samples met the criteria for frequency of analysis and relative retention time (RRT) windows. The percent accuracies met the criteria of 80-120% of the true value.

5. Laboratory Control Samples/Laboratory Control Sample Duplicates (LCS/LCSD) - *Laboratory/QAPP Criteria Could Not be Met*

LCS/LCSD are generated to provide information on the accuracy and precision of the analytical method and the laboratory performance. The LCS/LCSD recoveries were within the criteria of 70-130% with a relative percent difference ≤50% except for OBO0195F1/F2 for PCB-1260. The recoveries for this aroclor were >130%. The associated sample results for this analyte were non-detected, therefore, no qualifiers were applied based on the high recoveries.

6. Blank Analysis

Method blanks were analyzed with each sample batch to evaluate the potential for laboratory contamination and effects on the sample results. Target analytes were not detected in method blanks.

7. Surrogate Spikes

Surrogate recoveries are used to help in the evaluation of laboratory performance on individual samples. The surrogate compound used for these analyses was decachlorobiphenyl. All surrogate recoveries were within the criteria of 50-150%.

8. Matrix Spike/Matrix Spike Duplicate Analysis (MS/MSD)

MS/MSD analyses are performed to provide information on the effects of sample matrices toward the analytical method. An MS/MSD analysis was performed using sample 10224806 (S1/S2). The MS/MSD recoveries were within the criteria of 30-150% with a relative percent difference ≤50%.

9. Compound Quantitation

The initial calibration functions were used for calculations. Reported quantitation limits were based on the initial calibration standards and sample size used for the analysis.

Sample 10224800 was prepared and analyzed in duplicate. The relative percent difference was <50%.

All manual integrations have been reviewed and found to comply with acceptable integration practices.

10. Identification

PCBs and the surrogate were identified based on chromatographic retention times of two dissimilar gas chromatography columns as determined from the initial calibration and pattern matching with standards.

Sample 10224802 contained an interferent that resulted with the reporting limit for PCB-1260 to be raised for this analysis.

11. Changes from Preliminary Data

There were no differences between the preliminary and final results.

12. Data Qualifiers

All requirements for data qualifiers from the preceding sections were accumulated. Each sample data summary sheet and each compound was checked for positive or negative results. From this, the overall need for data qualifiers for each analysis was determined. In cases where more than one of the preceding sections required data qualifiers, the most restrictive qualifier has been added to the data.

The usefulness of qualified data should be treated according to the severity of the qualifier in light of the project's data quality objectives. Should questions arise regarding the data, contact Gerald Dodo at the Region 10 Laboratory, phone number (360) 871 - 8728.

Qualifier	Definition
U	The analyte was not detected at or above the reported value.
J	The identification of the analyte is acceptable; the reported value is an estimate.
UJ	The analyte was not detected at or above the reported value. The reported value is an estimate.
R	The presence or absence of the analyte can not be determined from the data due to severe quality control problems. The data are rejected and considered unusable. No value is reported with this qualification.
NA	Not Applicable, the parameter was not analyzed for, or there is no analytical result for this parameter. No value is reported with this qualification.

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REGION 10 LABORATORY
7411 Beach Dr. East
Port Orchard, Washington 98366

MEMORANDUM

SUBJECT: Data Release for PCB Aroclor Results from the Region 10 USEPA Laboratory

PROJECT NAME: APES and Merit Oil

PROJECT CODE: OOO-148A

FROM: Gerald Dodo, Supervisory Chemist
Office of Environmental Assessment
USEPA Region 10 Laboratory

TO: Bruce Long
Office of Compliance and Enforcement
USEPA Region 10

I have authorized release of this data package. Attached you will find the PCB Aroclor analysis results for the APES and Merit Oil samples collected on 06/01/10 and 06/03/10. For further information regarding the attached data, please contact me at 360-871-8728.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10 LABORATORY
7411 Beach Dr. East
Port Orchard, Washington 98366

MEMORANDUM

SUBJECT: Data Release for Volatile Organics Analysis Results from the Region 10 USEPA Laboratory

PROJECT NAME: APES and Merit Oil

PROJECT CODE: OOO-148A

FROM: Gerald Dodo, Supervisory Chemist
Office of Environmental Assessment
USEPA Region 10 Laboratory

TO: Bruce Long
Office of Compliance and Enforcement
USEPA Region 10

I have authorized release of this data package. Attached you will find the volatile organics analysis results for the APES and Merit Oil samples collected on 06/01/10. For further information regarding the attached data, please contact me at 360-871-8728.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10 LABORATORY
7411 Beach Dr. East
Port Orchard, Washington 98366

QUALITY ASSURANCE MEMORANDUM FOR ORGANIC CHEMICAL ANALYSES

Date: September 1, 2010

To: Bruce Long, Project Manager
Office of Compliance and Enforcement
USEPA Region 10

From: Gerald Dodo, Supervisory Chemist
Office of Environmental Assessment
USEPA Region 10 Laboratory

Subject: Quality Assurance Review of the APES and Merit Oil Project Volatile Organic Analysis Results

Project Code: OOO-148A
Account Code: 1011B10P201B53C

The following is a quality assurance review of the data from analyses of oil matrix samples from the APES and Merit Oil Project using USEPA Method 8261A for selected volatile organic analytes. The analyses were performed by USEPA chemists at the USEPA Region 10 Laboratory in Port Orchard, WA, following laboratory guidelines.

This review was conducted for the following samples:

10224802 10224804 10224805

1. Data Qualifications

Comments below refer to the quality control specifications outlined in the Laboratory's current Quality Assurance Manual, USEPA Method 8261A and the Quality Assurance Project Plan (QAPP).

The quality control measures which did not meet Laboratory/QAPP criteria are annotated in the title of each affected subsection with "*Laboratory/QAPP Criteria Not Met*".

For those tests for which the USEPA Region 10 Laboratory has been accredited by the National Environmental Laboratory Accreditation Conference (NELAC), all requirements of the current NELAC Standard have been met.

2. Sample Transport and Receipt

Samples were received in good condition. There were no issues identified in the sample transport or receipt that affected data quality.

3. Sample Holding Times

A holding time criterion does not exist for the matrix type of the samples. Due to the product-like or oil nature of the samples, the holding times prior to all analyses were judged to be acceptable.

4. Sample Preparation

Samples were prepared according to USEPA Method 8261A.

5. Tune Check

The vacuum distillation gas chromatograph/mass spectrometer system met the tuning check criteria for USEPA Method 8261A.

6. Initial Calibration and Calibration Verification - *Laboratory/QAPP Criteria Not Met*

The initial calibration was performed on 01/22/10. All analytes met the percent relative standard deviation (%RSD) of the response factors criteria of ≤20. A second source check was performed as a laboratory control sample with this initial calibration which resulted with percent differences <30 from the expected values except for 4-methyl-2-pentanone. This compound was not detected in the samples; therefore, no qualifiers were applied.

All calibration verification checks met the frequency and percent difference (%D) criteria of ±20% on the day of analysis with the exceptions listed below.

Analysis Date	Associated Sample	Analyte	%D	Qualifier (detected/not detected)
06/22/10	10224802	1,1-dichloroethane	-21	J/UJ
	10224804	cis-1,2-dichloroethene	-21	J/UJ
	10224805	trichloromethane	-22	J/UJ
		1,1,1,2-tetrachloroethane	-21	J/UJ

7. Laboratory Blanks

Method blanks were analyzed with each sample batch to evaluate the potential for laboratory contamination and effects on the sample results. Analytes detected in samples were reported without qualification if the results were five times (ten times for common laboratory contaminants) that of the blank(s). Detected sample results were qualified 'U' if the results were below these criteria. The sample concentration or the sample quantification limit, whichever is greater, was reported as the qualified result. Analytes were not detected in the blanks at or above the reporting limits.

8. Surrogate Spikes

The surrogate recoveries met the method criteria.

9. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

MS/MSD analyses are performed to provide information on the effects of sample matrices toward the analytical method. MS/MSD analyses were performed using sample 10224805 (S1/S2). The standard operating procedure criterion of 50-150% recovery was met. Recoveries for benzene, toluene, and tetrachloroethene were not measurable due to the spike level being too low relative to the high native concentrations in the sample.

10. Compound Quantitation

The initial calibration functions were used for calculations. Reported quantitation limits were based on the initial calibration standards and sample size used for the analysis. Detected analyte concentrations below the sample quantitation limits were qualified J. Toluene results for the samples were qualified J due to the measurements being above the calibration range.

All manual integrations have been reviewed and found to comply with acceptable integration practices.

11. Identification

All of the compounds detected in the analyses were within the RRT windows, met the USEPA spectral matching criteria and were judged to be acceptable.

12. Data Qualifiers

All requirements for data qualifiers from the preceding sections were accumulated. Each sample data summary sheet and each compound was checked for positive or negative results. From this, the overall need for data qualifiers for each analysis was determined. In cases where more than one of the preceding sections required data qualifiers, the most restrictive qualifier has been added to the data.

The usefulness of qualified data should be treated according to the severity of the qualifier in light of the project's data quality objectives. Should questions arise regarding the data, contact Gerald Dodo at the Region 10 Laboratory, phone number (360) 871 - 8728.

Data Qualifiers	
U	The analyte was not detected at or above the reported result.
J	The analyte was positively identified. The associated numerical result is an estimate.
UJ	The analyte was not detected at or above the reported estimated result. The associated numerical value is an estimate of the quantitation limit of the analyte in this sample.
R	The data are unusable for all purposes.
NA	Not applicable.

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IMPORTANT INFORMATION REGARDING ATTACHED FILE

This file contains data that is readable into Lotus, Excel, WordPerfect, or most databases.

You will need access to PKUNZIP, WINZIP or the compressed (zipped) folders utility provided with the Windows XP or Vista operating systems to decompress the file. Once "unzipped" there will be one large file (more appropriate for importing into a database) with the project code as the file name. The fields will be in the following order:

Project ID	Analyte	Matrix
Sample ID	Result	Sample Type Description
Sample Type	Units Code	Sample Description
Parameter Code	Qualifier	Version (Date this file was created)
Analyte Code	Date Collection End	

There will also be multiple smaller files with names such as "METQ1.txt," "GENSA.txt," "ORGSA-1.txt," etc. These files are meant to be imported into Lotus or Excel. To open select File/Open and select file type TEXT or .TXT.

The naming convention is as follows: SSSTT-#.TXT

Where:

- SSS: Metals (MET), General (GEN), Organics (ORG)
- TT: Sample Data (SA, Blanks (Q1), Matrix spikes/controls (Q2), Duplicates (Q3)
- #: If the table size exceeds 256 columns then the files will be split into multiple smaller files with sequential numbering. Lotus and Excel can only handle 256 columns.

Sample information appears in the following order:

Sample ID
Sample Description
Sample Type Matrix
Units

(It will be indicated if a cell contains data of units other than the default.)

Analyte information appears in the following order:

Parameter ID
Method Code
Analyte Code
Analyte Name

For General Chemistry data, sample information appears down the side. All other data has the sample information appearing across the top.

Any questions/suggestions should be e-mailed to Tony Morris at morris.tony@epa.gov.

Revised: November 18, 2009 TM

Manchester Environmental Laboratory
Report by Parameter for Project OOO-148A

Project Code:	OOO-148A	**Collected:**	6/1/10	**12:20:00**
Project Name:	APES AND MERIT OIL USA	**Matrix:**	Oil	
Project Officer:	BRUCE LONG	**Sample Number:**	10224802	
Account Code:	1011B10P201B53C	**Type:**	Reg sample	
Station Description:	TANK NO. 1			

ORG

Parameter : Volatiles — Container ID : N1
Method : 8261 VOA Vacuum Distillation — Analysis Date : 6/22/2010
Prep Method : 8261 VOA Vacuum Distillation — Prep Date :

			Result	Units	Qlfr	Error
Analytes(s):	630206	1,1,1,2-Tetrachloroethane	16	mg/L	UJ	
	71556	1,1,1-Trichloroethane	16	mg/L	U	
	75343	1,1-Dichloroethane	16	mg/L	UJ	
	75354	1,1-Dichloroethene	16	mg/L	U	
	107062	1,2-Dichloroethane	16	mg/L	U	
	591786	2-Hexanone	16	mg/L	U	
	108101	2-Pentanone, 4-methyl-	16	mg/L	U	
	71432	**Benzene**	**83**	**mg/L**		13
	108907	Benzene, chloro-	16	mg/L	U	
	56235	Carbon Tetrachloride	32	mg/L	U	
	156592	cis-1,2-Dichloroethene	16	mg/L	UJ	
	156605	Ethene, 1,2-dichloro-, (E)-	16	mg/L	U	
	79016	Ethene, trichloro-	16	mg/L	U	
	75003	Ethyl Chloride	160	mg/L	U	
	74873	Methane, chloro-	16	mg/L	U	
	67663	Methane, trichloro-	16	mg/L	UJ	0
	75092	Methylene Chloride	16	mg/L	U	
	127184	**Tetrachloroethene**	**180**	**mg/L**		22
	108883	**Toluene**	**1500**	**mg/L**	**J**	100
	75014	Vinyl Chloride	16	mg/L	U	
Surrogate(s :	171086934	1,1,2-trichloroethane-d3	100	%Rec		2
	93952080	1,2-dichloropropane-d6	101	%Rec		3
	1076433	Benzene-D6	97	%Rec		3
	3424597	ethylacetate-C13	108	%Rec		1
	1665005	methylene chloride-d2	91	%Rec		2
	13031328	nitromethane-C13	93	%Rec		5
	460004	p-Bromofluorobenzene	111	%Rec		3
	6745353	Vinyl chloride-d3	93	%Rec		0

Manchester Environmental Laboratory
Report by Parameter for Project OOO-148A

Project Code:	OOO-148A	**Collected:**	6/1/10	**11:25:00**
Project Name:	APES AND MERIT OIL USA	**Matrix:**	Oil	
Project Officer:	BRUCE LONG	**Sample Number:**	10224804	
Account Code:	1011B10P201B53C	**Type:**	Reg sample	
Station Description:	APES #1			

ORG

Parameter : Volatiles — Container ID : N1
Method : 8261 VOA Vacuum Distillation — Analysis Date : 6/22/2010
Prep Method : 8261 VOA Vacuum Distillation — Prep Date :

			Result	Units	Qlfr	Error
Analytes(s):	630206	1,1,1,2-Tetrachloroethane	16	mg/L	UJ	
	71556	1,1,1-Trichloroethane	16	mg/L	U	
	75343	1,1-Dichloroethane	16	mg/L	UJ	
	75354	1,1-Dichloroethene	16	mg/L	U	
	107062	1,2-Dichloroethane	16	mg/L	U	
	591786	2-Hexanone	16	mg/L	U	
	108101	2-Pentanone, 4-methyl-	16	mg/L	U	
	71432	**Benzene**	**100**	**mg/L**		16
	108907	Benzene, chloro-	16	mg/L	U	
	56235	Carbon Tetrachloride	32	mg/L	U	
	156592	cis-1,2-Dichloroethene	16	mg/L	UJ	
	156605	Ethene, 1,2-dichloro-, (E)-	16	mg/L	U	
	79016	Ethene, trichloro-	16	mg/L	U	
	75003	Ethyl Chloride	160	mg/L	U	
	74873	Methane, chloro-	16	mg/L	U	
	67663	Methane, trichloro-	16	mg/L	UJ	0
	75092	Methylene Chloride	16	mg/L	U	2
	127184	**Tetrachloroethene**	**260**	**mg/L**		32
	108883	**Toluene**	**1800**	**mg/L**	**J**	106
	75014	Vinyl Chloride	16	mg/L	U	
Surrogate(s :	171086934	1,1,2-trichloroethane-d3	114	%Rec		16
	93952080	1,2-dichloropropane-d6	104	%Rec		16
	1076433	Benzene-D6	100	%Rec		0
	3424597	ethylacetate-C13	103	%Rec		12
	1665005	methylene chloride-d2	94	%Rec		15
	13031328	nitromethane-C13	93	%Rec		3
	460004	p-Bromofluorobenzene	102	%Rec		16
	6745353	Vinyl chloride-d3	94	%Rec		0

Manchester Environmental Laboratory
Report by Parameter for Project OOO-148A

Project Code:	OOO-148A	**Collected:**	6/1/10	**12:30:00**
Project Name:	APES AND MERIT OIL USA	**Matrix:**	Oil	
Project Officer:	BRUCE LONG	**Sample Number:**	10224805	
Account Code:	1011B10P201B53C	**Type:**	Reg sample	
Station Description:	TANK NO.2			

ORG

Parameter : Volatiles — Container ID : N1
Method : 8261 VOA Vacuum Distillation — Analysis Date : 6/22/2010
Prep Method : 8261 VOA Vacuum Distillation — Prep Date :

			Result	Units	Qlfr	Error
Analytes(s):	630206	1,1,1,2-Tetrachloroethane	16	mg/L	UJ	
	71556	1,1,1-Trichloroethane	16	mg/L	U	
	75343	1,1-Dichloroethane	16	mg/L	UJ	
	75354	1,1-Dichloroethene	16	mg/L	U	
	107062	1,2-Dichloroethane	16	mg/L	U	
	591786	2-Hexanone	16	mg/L	U	
	108101	2-Pentanone, 4-methyl-	16	mg/L	U	
	71432	**Benzene**	**28**	**mg/L**		4
	108907	Benzene, chloro-	16	mg/L	U	
	56235	Carbon Tetrachloride	32	mg/L	U	
	156592	cis-1,2-Dichloroethene	16	mg/L	UJ	
	156605	Ethene, 1,2-dichloro-, (E)-	16	mg/L	U	
	79016	Ethene, trichloro-	16	mg/L	U	
	75003	Ethyl Chloride	160	mg/L	U	
	74873	Methane, chloro-	16	mg/L	U	
	67663	Methane, trichloro-	16	mg/L	UJ	0
	75092	Methylene Chloride	16	mg/L	U	
	127184	**Tetrachloroethene**	**36**	**mg/L**		4
	108883	**Toluene**	**1200**	**mg/L**	**J**	83
	75014	Vinyl Chloride	16	mg/L	U	
Surrogate(s :	171086934	1,1,2-trichloroethane-d3	113	%Rec		16
	93952080	1,2-dichloropropane-d6	101	%Rec		15
	1076433	Benzene-D6	98	%Rec		3
	3424597	ethylacetate-C13	103	%Rec		13
	1665005	methylene chloride-d2	95	%Rec		14
	13031328	nitromethane-C13	94	%Rec		7
	460004	p-Bromofluorobenzene	103	%Rec		16
	6745353	Vinyl chloride-d3	85	%Rec		1

Manchester Environmental Laboratory
Report by Parameter for Project OOO-148A

Project Code:	OOO-148A	**Collected:**	
Project Name:	APES AND MERIT OIL USA	**Matrix:**	Oil
Project Officer:	BRUCE LONG	**Sample Number:**	10224805
Account Code:	1011B10P201B53C	**Type:**	Matrix Spike
Station Description:			

ORG

Parameter : Volatiles — Container ID : N1
Method : 8261 VOA Vacuum Distillation — Analysis Date : 6/22/2010
Prep Method : 8261 VOA Vacuum Distillation — Prep Date :

			Result	Units	Qlfr	Error
Analytes(s):	71432	Benzene			NA	
	127184	Tetrachloroethene			NA	22
	108883	Toluene			NA	
Surrogate(s :	630206	1,1,1,2-Tetrachloroethane	115	%Rec		10
	71556	1,1,1-Trichloroethane	123	%Rec		15
	171086934	1,1,2-trichloroethane-d3	100	%Rec		2
	75343	1,1-Dichloroethane	124	%Rec		17
	75354	1,1-Dichloroethene	119	%Rec		24
	107062	1,2-Dichloroethane	116	%Rec		17
	93952080	1,2-dichloropropane-d6	98	%Rec		2
	591786	2-Hexanone	119	%Rec		19
	108101	2-Pentanone, 4-methyl-	118	%Rec		19
	108907	Benzene, chloro-	119	%Rec		19
	1076433	Benzene-D6	100	%Rec		2
	56235	Carbon Tetrachloride	119	%Rec		12
	156592	cis-1,2-Dichloroethene	120	%Rec		12
	156605	Ethene, 1,2-dichloro-, (E)-	126	%Rec		13
	79016	Ethene, trichloro-	120	%Rec		21
	75003	Ethyl Chloride	115	%Rec		2
	3424597	ethylacetate-C13	99	%Rec		5
	74873	Methane, chloro-	122	%Rec		23
	67663	Methane, trichloro-	118	%Rec		16
	75092	Methylene Chloride	119	%Rec		22
	1665005	methylene chloride-d2	92	%Rec		1
	13031328	nitromethane-C13	91	%Rec		0
	460004	p-Bromofluorobenzene	98	%Rec		1
	75014	Vinyl Chloride	121	%Rec		22
	6745353	Vinyl chloride-d3	89	%Rec		0

Manchester Environmental Laboratory
Report by Parameter for Project OOO-148A

Project Code:	OOO-148A	**Collected:**	
Project Name:	APES AND MERIT OIL USA	**Matrix:**	Oil
Project Officer:	BRUCE LONG	**Sample Number:**	10224805
Account Code:	1011B10P201B53C	**Type:**	Matrix Spike Dupl
Station Description:			

ORG

Parameter : Volatiles — Container ID : N1
Method : 8261 VOA Vacuum Distillation — Analysis Date : 6/22/2010
Prep Method : 8261 VOA Vacuum Distillation — Prep Date :

			Result	Units	Qlfr	Error
Analytes(s):	71432	Benzene			NA	19
	127184	Tetrachloroethene			NA	17
	108883	Toluene			NA	85
Surrogate(s :	630206	1,1,1,2-Tetrachloroethane	92	%Rec		15
	71556	1,1,1-Trichloroethane	95	%Rec		11
	171086934	1,1,2-trichloroethane-d3	113	%Rec		14
	75343	1,1-Dichloroethane	94	%Rec		13
	75354	1,1-Dichloroethene	90	%Rec		18
	107062	1,2-Dichloroethane	102	%Rec		20
	93952080	1,2-dichloropropane-d6	105	%Rec		15
	591786	2-Hexanone	98	%Rec		19
	108101	2-Pentanone, 4-methyl-	99	%Rec		19
	108907	Benzene, chloro-	93	%Rec		15
	1076433	Benzene-D6	99	%Rec		1
	56235	Carbon Tetrachloride	97	%Rec		10
	156592	cis-1,2-Dichloroethene	96	%Rec		10
	156605	Ethene, 1,2-dichloro-, (E)-	97	%Rec		10
	79016	Ethene, trichloro-	95	%Rec		16
	75003	Ethyl Chloride	97	%Rec		2
	3424597	ethylacetate-C13	105	%Rec		11
	74873	Methane, chloro-	95	%Rec		18
	67663	Methane, trichloro-	96	%Rec		19
	75092	Methylene Chloride	104	%Rec		24
	1665005	methylene chloride-d2	101	%Rec		14
	13031328	nitromethane-C13	95	%Rec		7
	460004	p-Bromofluorobenzene	106	%Rec		16
	75014	Vinyl Chloride	100	%Rec		18
	6745353	Vinyl chloride-d3	97	%Rec		1

Manchester Environmental Laboratory
Report by Parameter for Project OOO-148A

Project Code:	OOO-148A	**Collected:**	
Project Name:	APES AND MERIT OIL USA	**Matrix:**	Liquid
Project Officer:	BRUCE LONG	**Sample Number:**	BW0173B
Account Code:	1011B10P201B53C	**Type:**	Blank
Station Description:			

ORG

Parameter : Volatiles — Container ID : 0
Method : 8261 VOA Vacuum Distillation — Analysis Date : 6/22/2010
Prep Method : 8261 VOA Vacuum Distillation — Prep Date :

			Result	Units	Qlfr	Error
Analytes(s):	630206	1,1,1,2-Tetrachloroethane	2	ug/L	U	
	71556	1,1,1-Trichloroethane	2	ug/L	U	
	75343	1,1-Dichloroethane	2	ug/L	U	
	75354	1,1-Dichloroethene	2	ug/L	U	
	107062	1,2-Dichloroethane	2	ug/L	U	
	591786	2-Hexanone	2	ug/L	U	
	108101	2-Pentanone, 4-methyl-	2	ug/L	U	
	71432	Benzene	2	ug/L	U	0
	108907	Benzene, chloro-	2	ug/L	U	
	56235	Carbon Tetrachloride	4	ug/L	U	
	156592	cis-1,2-Dichloroethene	2	ug/L	U	
	156605	Ethene, 1,2-dichloro-, (E)-	2	ug/L	U	
	79016	Ethene, trichloro-	2	ug/L	U	
	75003	Ethyl Chloride	20	ug/L	U	
	74873	Methane, chloro-	2	ug/L	U	
	67663	Methane, trichloro-	2	ug/L	U	0
	75092	Methylene Chloride	2	ug/L	U	
	127184	Tetrachloroethene	2	ug/L	U	
	108883	Toluene	4	ug/L	U	0
	75014	Vinyl Chloride	2	ug/L	U	
Surrogate(s :	171086934	1,1,2-trichloroethane-d3	102	%Rec		2
	93952080	1,2-dichloropropane-d6	101	%Rec		2
	1076433	Benzene-D6	99	%Rec		1
	3424597	ethylacetate-C13	94	%Rec		3
	1665005	methylene chloride-d2	96	%Rec		2
	13031328	nitromethane-C13	98	%Rec		9
	460004	p-Bromofluorobenzene	100	%Rec		2
	6745353	Vinyl chloride-d3	96	%Rec		2

Manchester Environmental Laboratory
Report by Parameter for Project OOO-148A

Project Code:	OOO-148A	**Collected:**	
Project Name:	APES AND MERIT OIL USA	**Matrix:**	Liquid
Project Officer:	BRUCE LONG	**Sample Number:**	LCS0173A
Account Code:	1011B10P201B53C	**Type:**	LCS
Station Description:			

ORG

Parameter : Volatiles — Container ID : 0
Method : 8261 VOA Vacuum Distillation — Analysis Date : 6/22/2010
Prep Method : 8261 VOA Vacuum Distillation — Prep Date :

			Result	Units	Qlfr	Error
Surrogate(s :	630206	1,1,1,2-Tetrachloroethane	79	%Rec		7
	71556	1,1,1-Trichloroethane	80	%Rec		10
	171086934	1,1,2-trichloroethane-d3	102	%Rec		2
	75343	1,1-Dichloroethane	79	%Rec		11
	75354	1,1-Dichloroethene	85	%Rec		17
	107062	1,2-Dichloroethane	82	%Rec		12
	93952080	1,2-dichloropropane-d6	100	%Rec		2
	591786	2-Hexanone	95	%Rec		17
	108101	2-Pentanone, 4-methyl-	88	%Rec		16
	71432	Benzene	80	%Rec		13
	108907	Benzene, chloro-	80	%Rec		13
	1076433	Benzene-D6	100	%Rec		2
	56235	Carbon Tetrachloride	83	%Rec		8
	156592	cis-1,2-Dichloroethene	79	%Rec		8
	156605	Ethene, 1,2-dichloro-, (E)-	80	%Rec		8
	79016	Ethene, trichloro-	80	%Rec		14
	75003	Ethyl Chloride	81	%Rec	J	1
	3424597	ethylacetate-C13	103	%Rec		10
	74873	Methane, chloro-	86	%Rec		16
	67663	Methane, trichloro-	78	%Rec		11
	75092	Methylene Chloride	83	%Rec		15
	1665005	methylene chloride-d2	98	%Rec		2
	13031328	nitromethane-C13	119	%Rec		14
	460004	p-Bromofluorobenzene	100	%Rec		3
	127184	Tetrachloroethene	82	%Rec		10
	108883	Toluene	84	%Rec		5
	75014	Vinyl Chloride	85	%Rec		16
	6745353	Vinyl chloride-d3	103	%Rec		1

Manchester Environmental Laboratory
Report by Parameter for Project OOO-148A

Project Code:	OOO-148A	**Collected:**	6/1/10	**11:15:00**
Project Name:	APES AND MERIT OIL USA	**Matrix:**	Oil	
Project Officer:	BRUCE LONG	**Sample Number:**	10224800	
Account Code:	1011B10P201B53C	**Type:**	Reg sample	
Station Description:	R-02-10-0526-001			

ORG

Parameter : Polychlorinated Biphenyl — Container ID : N1
Method : 8082 Polychlorinated Biphenyls (PCBs/congeners) by GC — Analysis Date : 7/20/2010
Prep Method : 3580A 3580A Serial Dilution — Prep Date : 6/30/2010

			Result	Units	Qlfr
Analytes(s):	12674112	PCB-1016	9.4	mg/kg	U
	11104282	PCB-1221	9.4	mg/kg	U
	11141165	PCB-1232	19	mg/kg	U
	53469219	**PCB-1242**	**110**	**mg/kg**	
	12672296	PCB-1248	9.4	mg/kg	U
	11097691	PCB-1254	9.4	mg/kg	U
	11096825	PCB-1260	9.4	mg/kg	U
Surrogate(s :	*2051243	Decachlorobiphenyl	100	%Rec	

Report by Parameter for Project OOO-148A

Project Code:	OOO-148A	**Collected:**	
Project Name:	APES AND MERIT OIL USA	**Matrix:**	Oil
Project Officer:	BRUCE LONG	**Sample Number:**	10224800
Account Code:	1011B10P201B53C	**Type:**	Duplicate
Station Description:			

ORG

Parameter : Polychlorinated Biphenyl — Container ID : N1
Method : 8082 Polychlorinated Biphenyls (PCBs/congeners) by GC — Analysis Date : 7/20/2010
Prep Method : 3580A 3580A Serial Dilution — Prep Date : 7/14/2010

			Result	Units	Qlfr
Analytes(s):	12674112	PCB-1016	10	mg/kg	U
	11104282	PCB-1221	10	mg/kg	U
	11141165	PCB-1232	20	mg/kg	U
	53469219	**PCB-1242**	**110**	**mg/kg**	
	12672296	PCB-1248	10	mg/kg	U
	11097691	PCB-1254	10	mg/kg	U
	11096825	PCB-1260	10	mg/kg	U
Surrogate(s :	*2051243	Decachlorobiphenyl	91	%Rec	

Report by Parameter for Project OOO-148A

Project Code:	OOO-148A	**Collected:**	6/1/10	**11:20:00**
Project Name:	APES AND MERIT OIL USA	**Matrix:**	Oil	
Project Officer:	BRUCE LONG	**Sample Number:**	10224801	
Account Code:	1011B10P201B53C	**Type:**	Reg sample	
Station Description:	R-02-10-0526-002			

ORG

Parameter : Polychlorinated Biphenyl — Container ID : N1
Method : 8082 Polychlorinated Biphenyls (PCBs/congeners) by GC — Analysis Date : 7/16/2010
Prep Method : 3580A 3580A Serial Dilution — Prep Date : 6/30/2010

		Result	Units	Qlfr
Analytes(s): 12674112	PCB-1016	1.2	mg/kg	U
11104282	PCB-1221	1.2	mg/kg	U
11141165	PCB-1232	2.4	mg/kg	U
53469219	PCB-1242	1.2	mg/kg	U
12672296	PCB-1248	1.2	mg/kg	U
11097691	PCB-1254	1.2	mg/kg	U
11096825	PCB-1260	1.2	mg/kg	U
Surrogate(s : *2051243	Decachlorobiphenyl	58	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project OOO-148A

Project Code:	OOO-148A	**Collected:**	6/1/10	**12:20:00**
Project Name:	APES AND MERIT OIL USA	**Matrix:**	Oil	
Project Officer:	BRUCE LONG	**Sample Number:**	10224802	
Account Code:	1011B10P201B53C	**Type:**	Reg sample	
Station Description:	TANK NO. 1			

ORG

Parameter : Polychlorinated Biphenyl — Container ID : N1
Method : 8082 Polychlorinated Biphenyls (PCBs/congeners) by GC — Analysis Date : 7/20/2010
Prep Method : 3580A 3580A Serial Dilution — Prep Date : 6/30/2010

			Result	Units	Qlfr
Analytes(s):	12674112	PCB-1016	2.5	mg/kg	U
	11104282	PCB-1221	2.5	mg/kg	U
	11141165	PCB-1232	4.9	mg/kg	U
	53469219	**PCB-1242**	**60**	**mg/kg**	
	12672296	PCB-1248	2.5	mg/kg	U
	11097691	PCB-1254	9.8	mg/kg	U
	11096825	PCB-1260	25	mg/kg	U
Surrogate(s :	*2051243	Decachlorobiphenyl	73	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project OOO-148A

Project Code:	OOO-148A	**Collected:**	6/1/10	**12:20:00**
Project Name:	APES AND MERIT OIL USA	**Matrix:**	Oil	
Project Officer:	BRUCE LONG	**Sample Number:**	10224803	
Account Code:	1011B10P201B53C	**Type:**	Reg sample	
Station Description:	233418			

			Result	Units	Qlfr
ORG					
Parameter	: Polychlorinated Biphenyl				Container ID : N1
Method	: 8082	Polychlorinated Biphenyls (PCBs/congeners) by GC			Analysis Date : 6/30/2010
Prep Method	: 3580A	3580A Serial Dilution			Prep Date : 6/30/2010
Analytes(s):	12674112	PCB-1016	1.2	mg/kg	U
	11104282	PCB-1221	1.2	mg/kg	U
	11141165	PCB-1232	2.3	mg/kg	U
	53469219	PCB-1242	1.2	mg/kg	U
	12672296	PCB-1248	1.2	mg/kg	U
	11097691	PCB-1254	1.2	mg/kg	U
	11096825	PCB-1260	1.2	mg/kg	U
Surrogate(s :	*2051243	Decachlorobiphenyl	63	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project OOO-148A

Project Code:	OOO-148A	**Collected:**	6/1/10	**11:25:00**
Project Name:	APES AND MERIT OIL USA	**Matrix:**	Oil	
Project Officer:	BRUCE LONG	**Sample Number:**	10224804	
Account Code:	1011B10P201B53C	**Type:**	Reg sample	
Station Description:	APES #1			

ORG

Parameter : Polychlorinated Biphenyl — Container ID : N1
Method : 8082 Polychlorinated Biphenyls (PCBs/congeners) by GC — Analysis Date : 7/20/2010
Prep Method : 3580A 3580A Serial Dilution — Prep Date : 6/30/2010

		Result	Units	Qlfr
Analytes(s): 12674112	PCB-1016	2.5	mg/kg	U
11104282	PCB-1221	2.5	mg/kg	U
11141165	PCB-1232	5.0	mg/kg	U
53469219	**PCB-1242**	**63**	**mg/kg**	
12672296	PCB-1248	2.5	mg/kg	U
11097691	PCB-1254	2.5	mg/kg	U
11096825	PCB-1260	2.5	mg/kg	U
Surrogate(s : *2051243	Decachlorobiphenyl	71	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project OOO-148A

Project Code:	OOO-148A	**Collected:**	6/1/10	**12:30:00**
Project Name:	APES AND MERIT OIL USA	**Matrix:**	Oil	
Project Officer:	BRUCE LONG	**Sample Number:**	10224805	
Account Code:	1011B10P201B53C	**Type:**	Reg sample	
Station Description:	TANK NO.2			

ORG

Parameter : Polychlorinated Biphenyl — Container ID : N1
Method : 8082 Polychlorinated Biphenyls (PCBs/congeners) by GC — Analysis Date : 7/16/2010
Prep Method : 3580A 3580A Serial Dilution — Prep Date : 6/30/2010

			Result	Units	Qlfr
Analytes(s):	12674112	PCB-1016	2.3	mg/kg	U
	11104282	PCB-1221	2.3	mg/kg	U
	11141165	PCB-1232	4.6	mg/kg	U
	53469219	PCB-1242	2.3	mg/kg	U
	12672296	PCB-1248	2.3	mg/kg	U
	11097691	PCB-1254	2.3	mg/kg	U
	11096825	**PCB-1260**	**16**	**mg/kg**	
Surrogate(s :	*2051243	Decachlorobiphenyl	69	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project OOO-148A

Project Code:	OOO-148A	**Collected:**	6/2/10	**13:15:00**
Project Name:	APES AND MERIT OIL USA	**Matrix:**	Oil	
Project Officer:	BRUCE LONG	**Sample Number:**	10224806	
Account Code:	1011B10P201B53C	**Type:**	Reg sample	
Station Description:	MERIT 140			

			Result	Units	Qlfr
ORG					
Parameter	: Polychlorinated Biphenyl				Container ID : N1
Method	: 8082	Polychlorinated Biphenyls (PCBs/congeners) by GC			Analysis Date : 6/30/2010
Prep Method	: 3580A	3580A Serial Dilution			Prep Date : 6/30/2010
Analytes(s):	12674112	PCB-1016	1.2	mg/kg	U
	11104282	PCB-1221	1.2	mg/kg	U
	11141165	PCB-1232	2.5	mg/kg	U
	53469219	PCB-1242	1.2	mg/kg	U
	12672296	PCB-1248	1.2	mg/kg	U
	11097691	PCB-1254	1.2	mg/kg	U
	11096825	PCB-1260	1.2	mg/kg	U
Surrogate(s :	*2051243	Decachlorobiphenyl	59	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project OOO-148A

Project Code:	OOO-148A	**Collected:**	
Project Name:	APES AND MERIT OIL USA	**Matrix:**	Oil
Project Officer:	BRUCE LONG	**Sample Number:**	10224806
Account Code:	1011B10P201B53C	**Type:**	Matrix Spike
Station Description:			

			Result	Units	Qlfr
ORG					
Parameter	: Polychlorinated Biphenyl				Container ID : N1
Method	: 8082	Polychlorinated Biphenyls (PCBs/congeners) by GC			Analysis Date : 7/15/2010
Prep Method	: 3580A	3580A Serial Dilution			Prep Date : 7/14/2010
Surrogate(s :	*2051243	Decachlorobiphenyl	58	%Rec	
	12674112	PCB-1016	74	%Rec	
	11096825	PCB-1260	49	%Rec	

Report by Parameter for Project OOO-148A

Project Code:	OOO-148A	**Collected:**	
Project Name:	APES AND MERIT OIL USA	**Matrix:**	Oil
Project Officer:	BRUCE LONG	**Sample Number:**	10224806
Account Code:	1011B10P201B53C	**Type:**	Matrix Spike Dupl
Station Description:			

			Result	Units	Qlfr
ORG					
Parameter	: Polychlorinated Biphenyl				Container ID : N1
Method	: 8082	Polychlorinated Biphenyls (PCBs/congeners) by GC			Analysis Date : 7/15/2010
Prep Method	: 3580A	3580A Serial Dilution			Prep Date : 7/14/2010
Surrogate(s :	*2051243	Decachlorobiphenyl	56	%Rec	
	12674112	PCB-1016	74	%Rec	
	11096825	PCB-1260	49	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project OOO-148A

Project Code:	OOO-148A	**Collected:**	6/2/10	**12:20:00**
Project Name:	APES AND MERIT OIL USA	**Matrix:**	Oil	
Project Officer:	BRUCE LONG	**Sample Number:**	10224807	
Account Code:	1011B10P201B53C	**Type:**	Reg sample	
Station Description:	MERIT #3			

ORG

Parameter : Polychlorinated Biphenyl — Container ID : N1
Method : 8082 Polychlorinated Biphenyls (PCBs/congeners) by GC — Analysis Date : 7/21/2010
Prep Method : 3580A 3580A Serial Dilution — Prep Date : 6/30/2010

			Result	Units	Qlfr
Analytes(s):	12674112	PCB-1016	1.2	mg/kg	U
	11104282	PCB-1221	1.2	mg/kg	U
	11141165	PCB-1232	2.5	mg/kg	U
	53469219	PCB-1242	1.2	mg/kg	U
	12672296	**PCB-1248**	**1.9**	**mg/kg**	
	11097691	PCB-1254	1.2	mg/kg	U
	11096825	PCB-1260	1.2	mg/kg	U
Surrogate(s :	*2051243	Decachlorobiphenyl	63	%Rec	

Report by Parameter for Project OOO-148A

Project Code:	OOO-148A	**Collected:**	6/2/10	**13:50:00**
Project Name:	APES AND MERIT OIL USA	**Matrix:**	Oil	
Project Officer:	BRUCE LONG	**Sample Number:**	10224808	
Account Code:	1011B10P201B53C	**Type:**	Reg sample	
Station Description:	HYDROLIC OIL			

			Result	Units	Qlfr
ORG					
Parameter	: Polychlorinated Biphenyl				Container ID : N1
Method	: 8082	Polychlorinated Biphenyls (PCBs/congeners) by GC			Analysis Date : 7/21/2010
Prep Method	: 3580A	3580A Serial Dilution			Prep Date : 6/30/2010
Analytes(s):	12674112	PCB-1016	1.2	mg/kg	U
	11104282	PCB-1221	1.2	mg/kg	U
	11141165	PCB-1232	2.4	mg/kg	U
	53469219	PCB-1242	1.2	mg/kg	U
	12672296	**PCB-1248**	**1.9**	**mg/kg**	
	11097691	PCB-1254	1.2	mg/kg	U
	11096825	PCB-1260	1.2	mg/kg	U
Surrogate(s :	*2051243	Decachlorobiphenyl	61	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project OOO-148A

Project Code:	OOO-148A	**Collected:**	6/2/10	**13:16:00**
Project Name:	APES AND MERIT OIL USA	**Matrix:**	Oil	
Project Officer:	BRUCE LONG	**Sample Number:**	10224809	
Account Code:	1011B10P201B53C	**Type:**	Reg sample	
Station Description:	MERIT PRODUCT			

ORG

Parameter : Polychlorinated Biphenyl — Container ID : N1
Method : 8082 Polychlorinated Biphenyls (PCBs/congeners) by GC — Analysis Date : 6/30/2010
Prep Method : 3580A 3580A Serial Dilution — Prep Date : 6/30/2010

			Result	Units	Qlfr
Analytes(s):	12674112	PCB-1016	1.2	mg/kg	U
	11104282	PCB-1221	1.2	mg/kg	U
	11141165	PCB-1232	2.4	mg/kg	U
	53469219	PCB-1242	1.2	mg/kg	U
	12672296	PCB-1248	1.2	mg/kg	U
	11097691	PCB-1254	1.2	mg/kg	U
	11096825	PCB-1260	1.2	mg/kg	U
Surrogate(s :	*2051243	Decachlorobiphenyl	65	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project OOO-148A

Project Code:	OOO-148A	**Collected:**	6/3/10	**14:35:00**
Project Name:	APES AND MERIT OIL USA	**Matrix:**	Oil	
Project Officer:	BRUCE LONG	**Sample Number:**	10224810	
Account Code:	1011B10P201B53C	**Type:**	Reg sample	
Station Description:	0210 05 21001			

ORG

Parameter : Polychlorinated Biphenyl — Container ID : N1
Method : 8082 Polychlorinated Biphenyls (PCBs/congeners) by GC — Analysis Date : 6/30/2010
Prep Method : 3580A 3580A Serial Dilution — Prep Date : 6/30/2010

			Result	Units	Qlfr
Analytes(s):	12674112	PCB-1016	1.2	mg/kg	U
	11104282	PCB-1221	1.2	mg/kg	U
	11141165	PCB-1232	2.4	mg/kg	U
	53469219	PCB-1242	1.2	mg/kg	U
	12672296	PCB-1248	1.2	mg/kg	U
	11097691	PCB-1254	1.2	mg/kg	U
	11096825	PCB-1260	1.2	mg/kg	U
Surrogate(s :	*2051243	Decachlorobiphenyl	66	%Rec	

Project Code:	OOO-148A	**Collected:**	6/3/10	**14:35:00**
Project Name:	APES AND MERIT OIL USA	**Matrix:**	Oil	
Project Officer:	BRUCE LONG	**Sample Number:**	10224811	
Account Code:	1011B10P201B53C	**Type:**	Reg sample	
Station Description:	0210 05 24001			

ORG

Parameter : Polychlorinated Biphenyl — Container ID : N1
Method : 8082 Polychlorinated Biphenyls (PCBs/congeners) by GC — Analysis Date : 6/30/2010
Prep Method : 3580A 3580A Serial Dilution — Prep Date : 6/30/2010

			Result	Units	Qlfr
Analytes(s):	12674112	PCB-1016	1.2	mg/kg	U
	11104282	PCB-1221	1.2	mg/kg	U
	11141165	PCB-1232	2.4	mg/kg	U
	53469219	PCB-1242	1.2	mg/kg	U
	12672296	PCB-1248	1.2	mg/kg	U
	11097691	PCB-1254	1.2	mg/kg	U
	11096825	PCB-1260	1.2	mg/kg	U
Surrogate(s :	*2051243	Decachlorobiphenyl	62	%Rec	

Report by Parameter for Project OOO-148A

Project Code:	OOO-148A	**Collected:**	
Project Name:	APES AND MERIT OIL USA	**Matrix:**	Oil
Project Officer:	BRUCE LONG	**Sample Number:**	OBO0181B1
Account Code:	1011B10P201B53C	**Type:**	Blank
Station Description:			

ORG

Parameter : Polychlorinated Biphenyl — Container ID : 0
Method : 8082 Polychlorinated Biphenyls (PCBs/congeners) by GC — Analysis Date : 6/30/2010
Prep Method : 3580A 3580A Serial Dilution — Prep Date : 6/30/2010

			Result	Units	Qlfr
Analytes(s):	12674112	PCB-1016	1.3	mg/kg	U
	11104282	PCB-1221	1.3	mg/kg	U
	11141165	PCB-1232	2.5	mg/kg	U
	53469219	PCB-1242	1.3	mg/kg	U
	12672296	PCB-1248	1.3	mg/kg	U
	11097691	PCB-1254	1.3	mg/kg	U
	11096825	PCB-1260	1.3	mg/kg	U
Surrogate(s :	*2051243	Decachlorobiphenyl	110	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project OOO-148A

Project Code:	OOO-148A	**Collected:**	
Project Name:	APES AND MERIT OIL USA	**Matrix:**	Oil
Project Officer:	BRUCE LONG	**Sample Number:**	OBO0181F1
Account Code:	1011B10P201B53C	**Type:**	LCS
Station Description:			

		Result	Units	Qlfr

ORG

Parameter : Polychlorinated Biphenyl — Container ID : 0
Method : 8082 Polychlorinated Biphenyls (PCBs/congeners) by GC — Analysis Date : 6/30/2010
Prep Method : 3580A 3580A Serial Dilution — Prep Date : 6/30/2010

Surrogate(s :	*2051243	Decachlorobiphenyl	112	%Rec
	12674112	PCB-1016	93	%Rec
	11096825	PCB-1260	105	%Rec

Manchester Environmental Laboratory
Report by Parameter for Project OOO-148A

Project Code:	OOO-148A	**Collected:**	
Project Name:	APES AND MERIT OIL USA	**Matrix:**	Oil
Project Officer:	BRUCE LONG	**Sample Number:**	OBO0181F2
Account Code:	1011B10P201B53C	**Type:**	LCSD
Station Description:			

			Result	Units	Qlfr
ORG					
Parameter	: Polychlorinated Biphenyl				Container ID : 0
Method	: 8082	Polychlorinated Biphenyls (PCBs/congeners) by GC			Analysis Date : 6/30/2010
Prep Method	: 3580A	3580A Serial Dilution			Prep Date : 6/30/2010
Surrogate(s :	*2051243	Decachlorobiphenyl	116	%Rec	
	12674112	PCB-1016	95	%Rec	
	11096825	PCB-1260	108	%Rec	

Report by Parameter for Project OOO-148A

Project Code:	OOO-148A	**Collected:**	
Project Name:	APES AND MERIT OIL USA	**Matrix:**	Oil
Project Officer:	BRUCE LONG	**Sample Number:**	OBO0195B1
Account Code:	1011B10P201B53C	**Type:**	Blank
Station Description:			

ORG

Parameter : Polychlorinated Biphenyl — Container ID : 0
Method : 8082 Polychlorinated Biphenyls (PCBs/congeners) by GC — Analysis Date : 7/15/2010
Prep Method : 3580A 3580A Serial Dilution — Prep Date : 7/14/2010

			Result	Units	Qlfr
Analytes(s):	12674112	PCB-1016	1.3	mg/kg	U
	11104282	PCB-1221	1.3	mg/kg	U
	11141165	PCB-1232	2.5	mg/kg	U
	53469219	PCB-1242	1.3	mg/kg	U
	12672296	PCB-1248	1.3	mg/kg	U
	11097691	PCB-1254	1.3	mg/kg	U
	11096825	PCB-1260	1.3	mg/kg	U
Surrogate(s :	*2051243	Decachlorobiphenyl	120	%Rec	

Report by Parameter for Project OOO-148A

Project Code:	OOO-148A	**Collected:**	
Project Name:	APES AND MERIT OIL USA	**Matrix:**	Oil
Project Officer:	BRUCE LONG	**Sample Number:**	OBO0195B2
Account Code:	1011B10P201B53C	**Type:**	Blank
Station Description:			

ORG

Parameter : Polychlorinated Biphenyl — Container ID : 0

Method : 8082 Polychlorinated Biphenyls (PCBs/congeners) by GC — Analysis Date : 7/15/2010

Prep Method : 3580A 3580A Serial Dilution — Prep Date : 7/14/2010

			Result	Units	Qlfr
Analytes(s):	12674112	PCB-1016	1.3	mg/kg	U
	11104282	PCB-1221	1.3	mg/kg	U
	11141165	PCB-1232	2.5	mg/kg	U
	53469219	PCB-1242	1.3	mg/kg	U
	12672296	PCB-1248	1.3	mg/kg	U
	11097691	PCB-1254	1.3	mg/kg	U
	11096825	PCB-1260	1.3	mg/kg	U
Surrogate(s :	*2051243	Decachlorobiphenyl	106	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project OOO-148A

Project Code:	OOO-148A	**Collected:**	
Project Name:	APES AND MERIT OIL USA	**Matrix:**	Oil
Project Officer:	BRUCE LONG	**Sample Number:**	OBO0195F1
Account Code:	1011B10P201B53C	**Type:**	LCS
Station Description:			

			Result	Units	Qlfr
ORG					
Parameter	: Polychlorinated Biphenyl				Container ID : 0
Method	: 8082	Polychlorinated Biphenyls (PCBs/congeners) by GC			Analysis Date : 7/15/2010
Prep Method	: 3580A	3580A Serial Dilution			Prep Date : 7/14/2010
Surrogate(s :	*2051243	Decachlorobiphenyl	130	%Rec	
	12674112	PCB-1016	100	%Rec	
	11096825	PCB-1260	137	%Rec	

Manchester Environmental Laboratory
Report by Parameter for Project OOO-148A

Project Code:	OOO-148A	**Collected:**	
Project Name:	APES AND MERIT OIL USA	**Matrix:**	Oil
Project Officer:	BRUCE LONG	**Sample Number:**	OBO0195F2
Account Code:	1011B10P201B53C	**Type:**	LCSD
Station Description:			

			Result	Units	Qlfr
ORG					
Parameter	: Polychlorinated Biphenyl				Container ID : 0
Method	: 8082	Polychlorinated Biphenyls (PCBs/congeners) by GC			Analysis Date : 7/15/2010
Prep Method	: 3580A	3580A Serial Dilution			Prep Date : 7/14/2010
Surrogate(s)	: *2051243	Decachlorobiphenyl	128	%Rec	
	12674112	PCB-1016	96	%Rec	
	11096825	PCB-1260	131	%Rec	

Re: A Big Question just for YOU!
Steve Reimer to: Bruce Long 09/27/2010 01:16 PM

Bruce,

Benzene in samples from OOO-145B (ORRCO) and OOO-148A (APES) with toluene as a reference

Sample# OOO-148A	benzene (µg/mL)ppm	toluene ppm
10224802	83	1500
10224804	100	1800
10224805	28	1200
OOO-145B		
10144400	10	133
10144401	1600	12000
10144402	255	3000
10144403	55	540
10144404	203	2100

Enjoy,
Steve

Bruce Long Steve Do you remember those VOC samples yo... 09/22/2010 03:54:35 PM

From: Bruce Long/R10/USEPA/US
To: Steve Reimer/R10/USEPA/US@EPA
Date: 09/22/2010 03:54 PM
Subject: A Big Question just for YOU!

Steve

Do you remember those VOC samples you ran for me back in March, April and June? You asked me if I wanted benzene reported and I said know. Is it possible to re-read the data and identify the level of benzene in the sample, without having to rerun them?

Bruce Long, Compliance Officer
USEPA Oregon Operations
Tel - 503-326-3686
Fax - 503-326-3399

EPA EPA Region 10, 1200 Sixth Avenue, Seattle, WA 98101

Sample Custody & Analysis Required Form

EPA Manchester Laboratory, 7411 Beach Drive East, Port Orchard, WA 98366, 360-871-8700

Form Effective Date: July 2005 — Revision 1

Project Name	Project Code	Method of Shipment/carrier	Airbill Number (if known prior to sealing):
APES and Mar-t-o-l USA	000-148A	Fedex	7987 4862 0776

Account Code	EPA Project Manager/phone number	Check all that apply
20102011B10P101B53C	Bruce Long 503-326-3686	☒ Enforce/Custody ☐ Possible Toxic/Hazardous ☐ Data Confidential

Sampler Names (Print & Sign). *Mark* (R) *after name of principal recorder.*

Bruce Long (R)
Bruce Long

If applicable, circle the set of selected metals:

Al	Sb	As	Ba	Be
B	Cd	Ca	Cr	Co
Cu	Fe	Pb	Mg	Mn
Mo	Ni	K	Se	Ag
Na	Sn	Tl	V	Zn

(see reverse for more to add/circle)

① Matrix Codes:
10 Water/Liquid (Total)
20 Water/Liquid (Filtered)
40 Sediment/Soil/Solid/Bulk
70 Tissue
80 Oil/Solvent
44 Air filter
42 Wipe/Swab[1]
00 _____

[1] PCB wipe is to be 10cm x 10cm (100 cm²)

#C ② enter the number of containers for each preservative type followed by the appropriate preservation code P ③:

A - HCl
B - HNO_3
C - NaOH
D - H_2SO_4
E - $Na_2S_2O_3$
F - ascorbic acid[2], then HCl
G - $Na_2S_2O_3$+EDTA
H - EDTA
N - No chemical preservation
P - Bottles pre-preserved at lab
T - To be preserved at the lab

[2] *$Na_2S_2O_3$ if required by plan.*

W - _____

☐ Check here if the cooler is iced

④ Enter the letter or range of letters on each container for each group of containers with the same preservative type. Each container for each unique sample number must have a unique letter on it.

Laboratory: *see the applicable QAPP, SOW and/or Analytical Support Request for specific methods and detection, reporting, and/or quantitation limits*

Sampler's comments for the laboratory:

Aroclor 1260 was found by ORRCO on Samples 4800, 4501

EPA Sample number Yr	Wk	Sequence	Sampling Date & Time Yr	Mo	Day	Time	Matrix ①	#C ②	P ③	#C ②	P ③	#C ②	P ③	#C ②	P ③	Sampler Initials	Sample/Station Description/Field Measurements	Organics (see reverse) VOA	BNA	Pest	PCB	PAH	Metals (see reverse) CLP	Selected	Mercury	Micro (see reverse) E. Coli	F. Coliform	T. Coliform	General Chemistry (see reverse) TSS	TDS	BOD 5	NO2+NO3	Oil & Grease	Asbestos	Additional Write in Analyses (see reverse)			
10	22	4505 00	10	06	01	1115	80	1	N							BX	R-02-10-0526-001	110/42			X																		
10	22	4506 00	10	06	01	1120	80	1	N							BX	R-02-10-0526-002				X																		
10	22	4302 00	10	06	01	1220	80	1	N							BB	Tank No. 1	60/42	X		X																		
10	22	4303 00	10	06	01	1220	80	1	N							KD	233418				X																		
10	22	4504 00	10	06	01	1225	80	1	N							KB	APES #1	63/42	X		X				X														
10	22	4505 00	10	06	01	1230	80	1	N							KB	Tank No. 2	16/60	X		X																		
10	22	4806 00	10	06	01	1315	80	1	W							KB	Mar-t 140				X																		
10	22	4807 00	10	06	02	1220	80	1	W							KB	Mar-t #3	1.9/48			X																		
10	22	4808 00	10	06	02	1350	80	1	W							KB	Hydraulic oil	1.9/48			X																		
10	22	4809 00	10	06	02	1355	80	1	W							KB	Mar-t Robot				X																		
10	22	4810 00	10	06	31	1435	80	1	N							KB	021005 21001				X																		
10	22	4811 00	10	06	31	1445	80	1	N							KB	021005 24001				X																		
																	(End)																				

Chain of Custody Record

Relinquished by *(Signature)*	Date	Time	Received by *(Signature)*	Date	Time
Relinquished by *(Signature)*	Date	Time	Received by *(Signature)*	Date	Time
Relinquished by *(Signature)*	Date	Time	Received by **Mobile Lab** for Field Analysis *(Signature)*	Date	Time
Shipped by *(Signature)* Bruce Long	Date 6/10/2010	Time 10:30	Received for **lab** by *(Signature)* KNOOP	Date 6/11/10	Time 12:00

Receiving Laboratory Information Condition of Samples upon Receipt at Lab:

Good

Custody Seals Intact: ☑ yes ☐ no ☐ none

Distribution: White - Laboratory Copy;
Yellow - Regional Sample Control Center (RSCC) Copy; Pink - Field or Office Copy

Leachate 50 Sludge 60 Air

in use at the EPA Region 10 Laboratory. Pick the matrix code x. If in the opinion of the sampler, the sample matrix needs to d write in a matrix description. Remember, tissue can be

, cross out one of the pre-printed analyses and write in ided analyte symbol/abbreviation (some analyses are not

form:

rbons (these are a subset of the compounds reported from GC- C or SIM-GC/MS methods are usually requested in order to get chlorine Pesticides **PCB** Polychlorinated Biphenyls aka organic compounds **BNA** (aka SVOC or SVOA) - semivolatile

in:

rominated hydrocarbons) **Butyltins** Butyltins (mono, di, tri, nated Biphenyl Congener analysis **Chlor Hyd**. Chlorinated **Gua/Cat** Guaiacols/Catechols scan **Herb** Herbicides **OP Pest** **BDE** Polybrominated diphenylethers **Resin Acids** **TPH-Dx** el range **TPH-Dx-ext** Total Petroleum Hydrocarbons, diesel **Gx** Total Petroleum Hydrocarbons, gasoline range **TPH-HCID** tification **THMs** Trihalomethanes

rm *(<u>underlined</u> = 'CLP metals' - mercury must be*

enic **Ba** <u>barium</u> **Be** <u>beryllium</u> **B** boron **Cd** <u>cadmium</u> alt **Cu** <u>copper</u> **Fe** <u>iron</u> **Pb** <u>lead</u> **Mg** <u>magnesium</u> ickel **K** <u>potassium</u> **Se** <u>selenium</u> **Ag** <u>silver</u> **Na** <u>sodium</u> n <u>zinc</u>

and then circled under the box used for

:

n **Mo** molybdenum **Sr** strontium **Ti** titanium **W** tungsten

yzed for on matrices other than soil/sed or water.

rinted on the form:

n Fecal Coliform **T. Coliform** Total Coliform

can be written in:

rticulate Analysis for Determining GWUDI

phage **Staph a** Staphylococcus aureus

hing Procedure (TCLP) write in analyses[3]:

bicides **TCLP met+Hg** TCLP metals including mercury g mercury **TCLP Hg** TCLP mercury **TCLP Pest** TCLP

cted for analytes with a TCLP regulatory criteria.

General analyses pre-printed on the form:

BOD Biochemical Oxygen Demand **NO_2+NO_3** Nitrite plus Nitrate **Oil & Grease** **TDS** Total Dissolved Solids **TSS** Total Suspended Solids

General analyses that can be written in:

Acidity **Alk** Alkalinity **TNH3** Ammonia **HCO_3** Bicarbonate **Br** Bromide **CO_3** Carbonate **COD** Chemical Oxygen Demand **Cl** Chloride **Color** Color **Cond** Conductivity **CN** Cyanide **CN-W&D** Cyanide, weak & dissociable **Flash** Flash Point **F** Fluoride **Grn Siz** Grain Size **Hard** Hardness **NO_2** Nitrite **NO_3** Nitrate **TNVS** Non-Volatile Solids **NVSS** Non-Volatile Suspended Solids **CLO_4** Perchlorate **pH** **Phenol** Phenolics **SiO_3** Silica - dissolved **SO_4** Sulfate **S** Sulfide **TOC** Total Organic Carbon **TS** Total Solids **% V Slds** % Volatile Solids **TVS** Volatile Solids **TVSS** Volatile Suspended Solids **SetSlds** Settleable Solids **% Tot** % Total Solids **TKN** Total Kjeldahl Nitrogen **T-Phos** Total Phosphorous **D-Phos** Dissolved Phosphorous **O-Phos** Ortho Phosphrous **D-O-Phos** Dissolved Ortho Phosphrous **Turb** Turbidity

Container guidance.

Note: this is general information only - consult the QA Project Plan on appropriate containers and preservatives for each project. Modifying methods may require modifying the number/type of containers. Freezing samples for one or more analyses may require collection of individual containers. Contact the laboratory for minimum sample volumes in situations where sample material is limited. Minimum volumes required for analysis will depend on the analysis and required reporting limits.

Containers for soil/sediment:

Metals/cyanide/mercury: 1, wide mouth 8 ounce glass or HDPE.
Extractable organics: 1, 8 ounce wide mouth amber glass, for one or two analyte groups
Inorganics and organics: 1, sixteen ounce wide mouth amber glass.
VOAs/purgeables: Contact the laboratory for the proper number/type of special Closed-System sample containers.

Containers/chemical preservatives for water[4]:

Metals/regular mercury: 1, one liter HDPE, HNO3 to pH<2
Mercury by method 1631: HCl and 250 mL containers provided by MEL
Cyanide: 1, 250 mL or larger HDPE, remove sulfides and/or residual chlorine then add NaOH to pH>12
Extractable organics (BNA, Pest, PCP, PAH etc.): two, one liter amber glass containers **for each analysis** - if more than one liter will be extracted for the project, it is advisable that the container size match (but not exceed) the volume to be extracted. Two separate volumes are usually collected for each analysis to allow for re-extraction if needed.
VOAs/purgeables: 3, zero headspace 40 mL amber glass vials with Teflon Septa, remove residual chlorine then add HCl to pH<2
Alkalinity: 1, 250 mL or larger HDPE, no extra volume for lab QC
Ammonia: 1, 250 mL or larger HDPE, H2SO4 to pH<2, no extra volume for lab QC
BOD 5: 1, one gallon HDPE, no extra volume for lab QC
TSS: 1, one liter or larger HDPE, no extra volume for lab QC
TDS: 1, 250 mL or larger HDPE, no extra volume for lab QC
Oil & Grease: 1, one liter clear glass, HCl to pH<2, submit 4 **separate** containers for the lab QC sample
NO2+NO3: 1, 250 mL or larger HDPE, H2SO4 to pH<2, no extra volume for lab QC
Br, Cl, F, SO4, CLO4: for analysis by ion chromatography, 1, 100 mL or larger HDPE, no extra volume for lab QC

[4] *Water samples to be designated for lab QC should have double volume submitted for metals, triple volume for organics. In general, extra volume is usually not required for lab QC for soil/sediment.*

EPA Region 10, 1200 Sixth Avenue, Seattle, WA 98101

Sample Custody & Analysis Required Form

EPA Manchester Laboratory, 7411 Beach Drive East, Port Orchard, WA 98366, 360-871-8700

Form Effective Date: July 2005

Revision 1

Project Name	Project Code	Method of Shipment/carrier	Airbill Number (if known prior to sealing):
APES and Merit 0:1 USA	000-14A	Fedex	7987 4862 0776
Account Code	**EPA Project Manager/phone number**	**Check all that apply**	
20102011 B10P201 B53C	Bruce Long 503-326-3686	☒ Enforce/Custody ☐ Possible Toxic/Hazardous ☐ Data Confidential	

Sampler Names (Print & Sign). *Mark* (R) *after name of principal recorder.*

Bruce Long (R)

If applicable, circle the set of selected metals:

Al	Sb	As	Ba	Be
B	Cd	Ca	Cr	Co
Cu	Fe	Pb	Mg	Mn
Mo	Ni	K	Se	Ag
Na	Sn	Tl	V	Zn

(see reverse for more to add/circle)

① Matrix Codes:
10 Water/Liquid (Total)
20 Water/Liquid (Filtered)
40 Sediment/Soil/Solid/Bulk
70 Tissue
80 Oil/Solvent
44 Air filter
42 Wipe/Swab[1]
00 _____

[1] PCB wipe is to be 10cm x 10cm (100 cm²)

#C ② enter the number of containers for each preservative type followed by the appropriate preservation code P ③:

A - HCl
B - HNO_3
C - NaOH
D - H_2SO_4
E - $Na_2S_2O_3$
F - ascorbic acid[2], then HCl
G - $Na_2S_2O_3$+EDTA
H - EDTA
N - No chemical preservation
P - Bottles pre-preserved at lab
T - To be preserved at the lab

[2] $Na_2S_2O_3$ *if required by plan.*

W - _____

☐ Check here if the cooler is iced

④ Enter the letter or range of letters on each container for each group of containers with the same preservative type. Each container for each unique sample number must have a unique letter on it.

Laboratory: *see the applicable QAPP, SOW and/or Analytical Support Request for specific methods and detection, reporting, and/or quantitation limits*

Sampler's comments for the laboratory:
Aroclor 1260 was found by ORRCO on Samples 4800, 4801

EPA Sample number Yr	Wk	Sequence	Sampling Date & Time Yr	Mo	Day	Time	Matrix ①	#C ②	P ③	#C ②	P ③	#C ②	P ③	#C ②	P ③	Sampler Initials	Sample/Station Description/Field Measurements	Organics (see reverse) VOA	BNA	Pest	PCB	PAH	Metals (see reverse) CLP	Selected	Mercury	Micro (see reverse) E. Coli	F. Coliform	T. Coliform	General Chemistry (see reverse) TSS	TDS	BOD 5	NO2+NO3	Oil & Grease	Asbestos	Additional Write in Analyses (see reverse)			
10	22	4800	10	06	01	1115	80	B	N							BB	R-02-10-0526-001 #3				X																		
10	22	4801	10	06	01	1120	80	1	N							BB	R-02-10-0526-002 #4				X																		
10	22	4802	10	06	01	1220	80	1	N							BB	Tank No. 2 EPA Sample	X			X																		
10	22	4803	10	06	01	1220	80	1	N							BB	233418 From Eugene				X																		
10	22	4804	10	06	01	1125	80	1	N							BB	APES #1 ORRCO Retain Tank	X			X																		
10	22	4805	10	06	01	1230	80	1	N							BB	Tank No. 2 EPA Sample	X			X																		
10	22	4806	10	06	02	1315	80	1	N							BB	Merit 140 Re-Refined Oil Products				X																		
10	22	4807	10	06	02	1220	80	1	N							BB	Merit #3				X																		
10	22	4808	10	06	02	1350	80	1	N							BB	Hydralic oil Merit Products				X																		
10	22	4809	10	06	02	1316	80	1	N							BB	021005210001 #1				X																		
10	22	4811	10	06	03	1435	80	1	N							BB	021005240001 #2				X																		
																	(End)																					

Chain of Custody Record

Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time
Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time
Relinquished by (Signature)	Date	Time	Received by **Mobile Lab** for Field Analysis (Signature)	Date	Time
Shipped by (Signature) Bruce Long	Date 6/10/2010	Time 10:30	Received for **lab** by (Signature)	Date	Time

Receiving Laboratory Information Condition of Samples upon Receipt at Lab:

Custody Seals Intact: ☐ yes ☐ no ☐ none

Distribution: White - Laboratory Copy;
Yellow - Regional Sample Control Center (RSCC) Copy; Pink - Field or Office Copy